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Hedonic Architecture: Coexistence of Hyper Stimulating and Hypo Stimulating Experiences

Rossitza Iovtcheva

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Hedonic Architecture:

Coexistence of Hyper Stimulating and Hypo Stimulating Experiences

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preface

claim

As architects, we must steer away from purely conceptual design as well as designs that are primarily driven by efficiency. Instead, we must redirect our focus to the **experience of the occupant**. The correlation of neuroscience and architecture is critical in order to effectively design space.

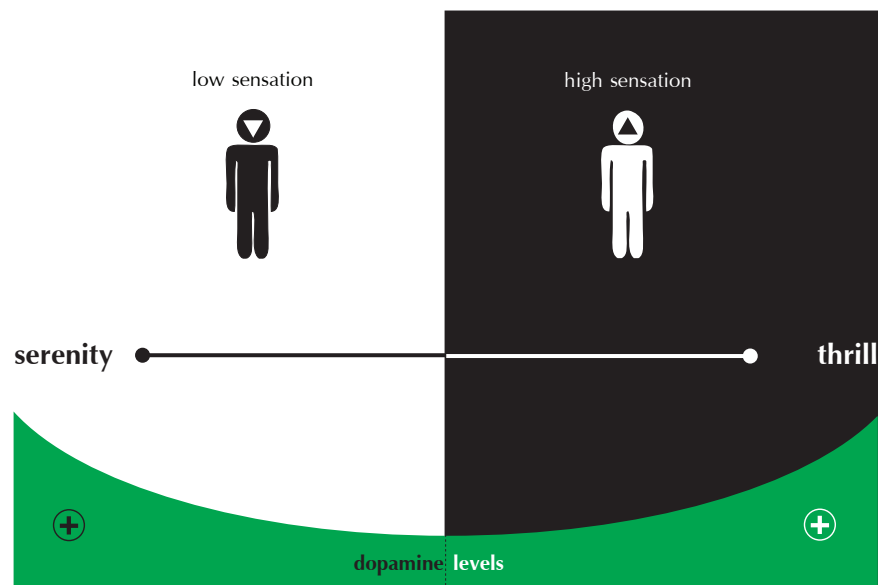
Due to the differences in our genetic makeup, sensation seeking levels are unique leading to two categories of occupants, ones that search for **hyper stimulation** and others for **hypo stimulation**. By analyzing **stress reducing and panic inducing environments through a set of architectural lenses**, the correlation of design and neurological effects can be defined. While the principles delineated by the study of **environmental based design** will guide the stress reducing analysis, **amplifying stimulation through risk**, in association to the **five innate human fears**, will guide the panic inducing analysis.

This thesis proposes that rehabilitating effects can be achieved through natural stimulation facilitated by the architectural design. **It argues that while hospital design requires stress reduction to improve healing, a polar experience of hyper stimulation is also necessary for a substance abuser in order to yield a decrease of relapse rates.**

introduction

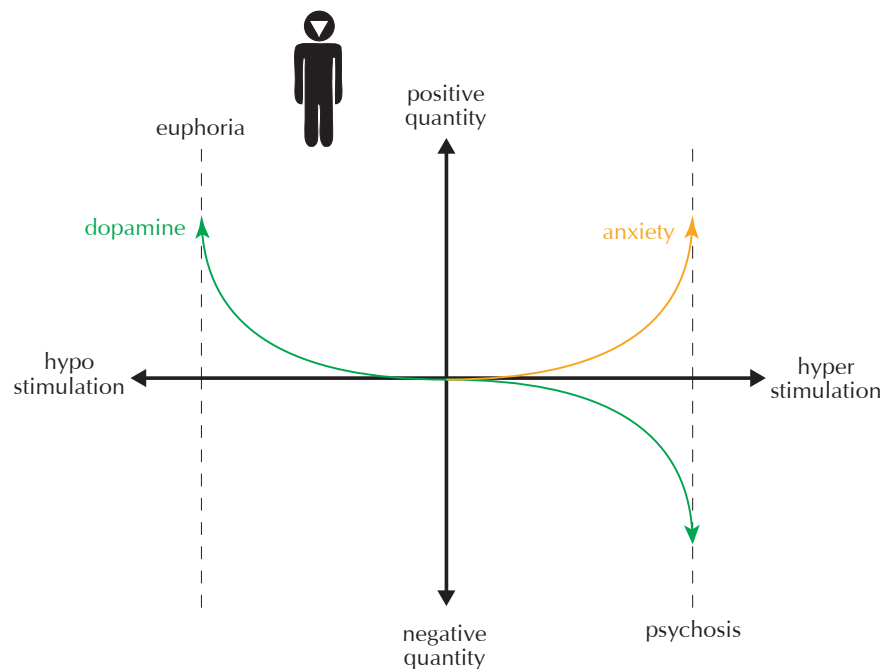
Experiences are created through **stimulation of the senses**. These sensations send neural impulses among the nerves to the brain where they are decoded. **The brain depends on several important chemicals that allow for decoding to occur in order to facilitate an emotional response.** Among these chemicals are the **neurotransmitters** including acetylcholine, dopamine, epinephrine, norepinephrine, and serotonin.¹ In order for a person to be mentally and in turn physically healthy, these **neurotransmitters must remain in balance** with one another. Imbalances may result in the development of psychological disorders. Medicine is typically prescribed to help regain balance and decrease effects of the diseases. **Synthetic stimulants**, however, tend to lose of effectiveness over time causing only a **temporary change**.² This is because they function as **dopamine agonists**, “mimicking the action of dopamine rather than replenishing the inadequate supply.”³

Experience caused by the physical environment can also lead to an alteration in the production of each neurotransmitter through natural stimulation. While one is a substance that triggers a euphoric reaction synthetically, the other allows for the body to naturally “engineer” this euphoric feeling “through exposure of images and activities that stimulate a strong emotional response.”⁴



Due to the differences in our genetic makeup, this strong emotional response can be achieved in quiet opposing ways. **Dr. Marvin Zuckerman argues that these emotional responses as well as our behavior are dependent on a sensation-seeking trait.** Writing over 200 articles and book chapters,⁵ Zuckerman contends that this trait is defined by the “seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experiences.”⁶ In his article, *Sensation Seeking in England and America: Cross-cultural, age, and sex comparisons*,⁷ he argues that it can be measured and scaled based on a person’s **reaction to risk**. While Zuckerman Sensation Seeking Scale (SSS) is heavily reliant on the participant’s response to a question, **psychopharmacological studies were done in attempt to find a biological explanation for the differences between low and high sensation seekers.** It was concluded that **dopamine**, the neurotransmitter associated with the **pleasure** system of the brain as well as **enjoyment and motivation**, is **strongly correlated to the SS trait.**⁸ Depending on the classification of personality type, low sensation vs high sensation, **particular experiences lead to the increase in dopamine to reach a “mental high”.** For HSS, thrilling experiences lead to pleasure due to them being able to handle the high levels of stimulation and risk, while for LSS, these experiences lead to anxiety. LSS find pleasure in experiences that are stress reducing, while HSS find these places to be boring due to the **lack of stimulation.**⁹ Evolutionary speaking, both of these personality types are necessary. “In a diverse society, you need both types,” Zuckerman says. “You need people to keep the books and make laws and have families, and you need your adventurers like Columbus to explore and find excitement.”¹⁰

hypo stimulation



Hypo stimulation is preferred by low sensation seekers (LSS). LSS actively avoid excitement due to the **increase of anxiety** that is facilitated. Through hyper stimulation, the brain experiences confusion and panic **leading to a depletion of dopamine.** This effect grows exponentially and may lead to psychosis. Psychotic thoughts such as delusions and hallucinations begin to occur as well as paranoia facilitated by fear.¹¹ For LSS, in order for dopamine levels to increase and induce the feeling of pleasure, **control, organization, and clarity are necessary.** These elements result in a calming and serene environment with no sense of disorientation creating a completely hedonic state of mind. The reward is euphoria.

Instead of prescribing medicine such as, Xanax, to reduce anxiety synthetically in order to achieve a temporary “mental high”, **natural therapies such as meditation and yoga can help.** By decreasing stimulation and allowing one to focus on the control of the body, a calming effect is created. **This effect can directly be heightened by places designed with tranquility in mind like spas, sanatoriums, and Zen gardens.**¹² Historically, the overlapping of the two fields of neuroscience and architecture has been widely discussed. While the assumption that view and sunlight have a positive effect on our health has been previously made resulting in projects such as **Dr. Auguste Rollier’s, sunlight clinic in the Alps,** no real data has been derived to prove the correlation. **Architects like Frank Lloyd Wright, Alvar Aalto, and Richard Neutra believed there was a need for a connection to be made between nature and architecture in order to create a comfortable environment.** This led to Frank Lloyd Wright coining the term organic architecture.

hypo stimulating programs



meditation | **ryoanji zen garden**

Known as one of the most famous meditation gardens, the Ryoanji Zen Garden creates a meditating effect through the careful placement of rocks based on **principles found in nature**. Studies have proven that the position of these rocks is calming because of the hidden geometries. The spacing in the rocks form the outline of a tree's branches. The tranquility achieved from such a space shows how important nature is to our perception and mind set. ¹³



sanatoriums | **paimio sanatorium**

Designed by Alvar Aalto, this project integrates **nature and architecture** in order to achieve a healing effect. Light was a central aspect to the project due to the contention, which was later proven, that light aids with healing. The site and material were both crucial in achieving this tranquil effect. Soothing colors were also to ease the strain and further relax tuberculosis patients.¹⁴



spas | **therme vals**

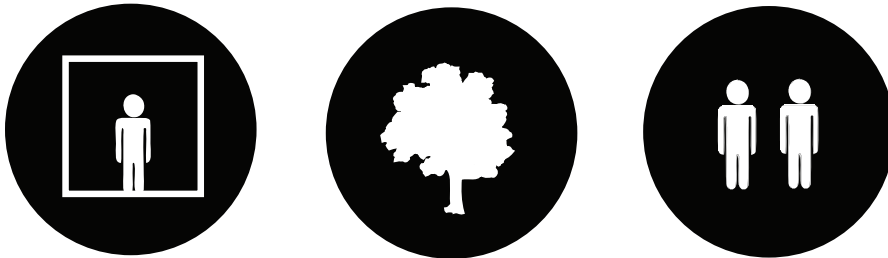
Located in the mountains of Switzerland, this design strives to connect architecture with the site as well as create relaxing effects through the interplay of dark vs light, open vs closed space. The flowing circulation allows one to move from exterior space to the inside with ease.

view	recovery time (days)	negative notes (per day)	change in strong analgesic dose (day 2-5)
tree group	7.96	1.13	-1.44
wall group	8.7	3.96	-.08

*graph showing correlation of view to recovery time, number of negative notes, and change in strong analgesic dose

Beginning in 1972, Roger Ulrich set out to test the effects of views through a window on the recovery time of a patient. In this study, two groups of patients were tested, one group with views towards natural settings while the other, urban views lacking natural elements. **The results not only showed a decrease in healing time, but it led mood enhancement as well as a decrease in the necessary intake of medicine.**¹⁵ Richard Neutra's book, *Survival through Design*, suggests that "a workable understanding of how our psychosomatic organism ticks, information on sensory clues, which wind its gorgeous clockwork or switch it this way or that, undoubtedly will someday belong in the designer's mental tool chest."¹⁶ While that was not possible in the year of 1954, today's tools of neuroscience and immunology have advanced so much as to be able to inform the two fields of neuroscience and architecture what leads to quicker healing. With a strong contention to progress the correlation of both subjects, John Eberhard decided to create the **Academy of Neuroscience for Architecture**. In 2005, the Woods Hole Conference was held in effort to discuss potential integration of both subject's findings. Breaking up into "subject" groups, **the invited architects and neuroscientists would answer a series of questions of how elements of architecture can influence health through their lens.** For example, Roger Ulrich was the chair of the "windows" group where he discussed the effects that windows have on space such as lighting and air infiltration, while the neuroscientist "monitored the areas of the brain that became active when patient was looking at a scene."¹⁷ Upon concluding their analysis, the group would create a statement on how certain architectural elements create effects that elicit positive reactions due to the level of stress reduction.

EBD principles

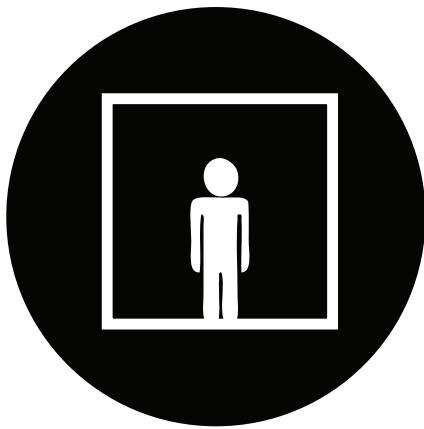


Roger Ulrich is also responsible for defining the field of **evidence-based design (EBD)**, “the deliberate attempt to base health care building design decisions on best available evidence.”¹⁸ This evidence is based off of the studies done such as his own as well as ones conducted during the Woods Hole Conference. In addition, research conducted by environmental psychologists have also aided in the delineation of **3 main principles of stress reduction: social support, control, and the integration of nature into the design.**¹⁹ EBD has become very popular in the healthcare design field in the last decade. By putting the focus on the experience of the patient, architects are able to decrease their stress levels. **This decrease in stress allows the body’s immune system to feel a sense of euphoria due to the dopamine increase.** Triggering the emotional centers, nerve chemicals and hormones are released that alter how the immune cells fight disease.²⁰



social support

The support from family and friends is extremely helpful in the process of healing and recovery because it is something that the patient understands and is used to. Interaction with the public in general in spaces designed for communal gatherings can aid in transition from hospital to home after. **Human's need interaction. Without it, they become anxious that people may not want to be around them leading to loss of communication skills and paranoia.**



control

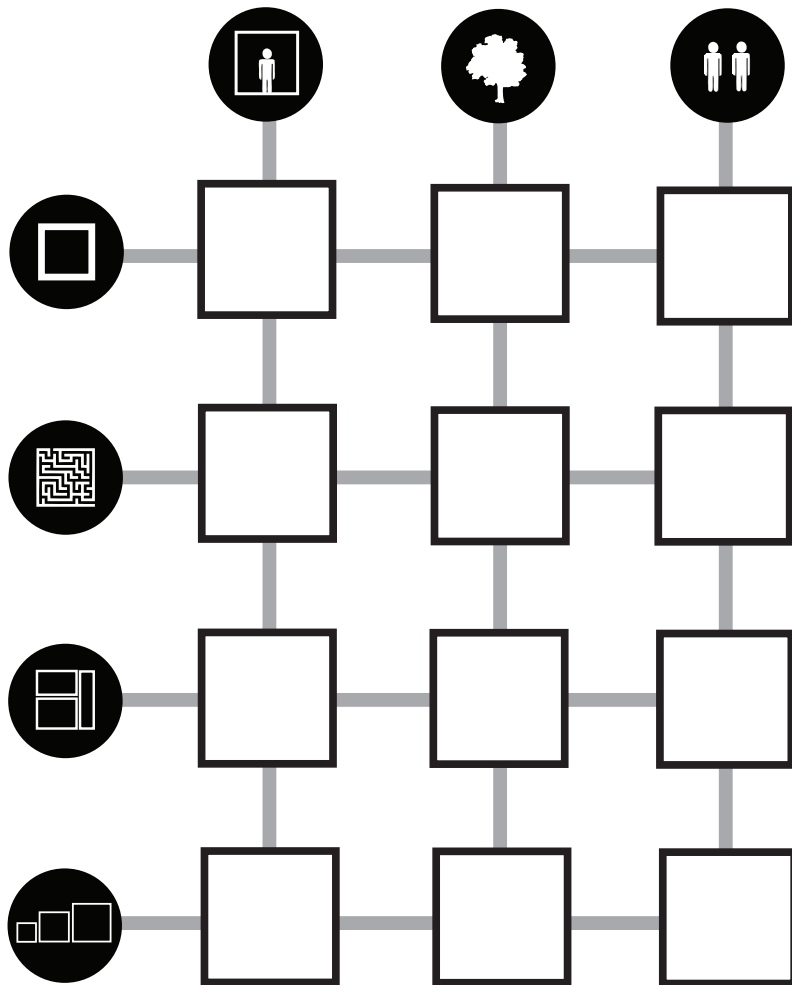
When one is injured or has some sort of deficiency, they feel **helpless**. This is why it is essential to give the occupants **choices**. In addition, **restriction and compartmentalization** should be avoided. Anxiety raises in a LSS when they are confined due to the feeling that the situation is out of their control making them feel weaker and in turn less decreasing their rate of healing. In addition, wayfinding is another issue in hospital and architectural cues as well as clear circulation can help decrease the sense of disorientation.



integration of nature

By allowing **natural light** to filter in, stress levels are naturally reduced. This study has been applied to numerous programs, office spaces and hospitals being most popular. In addition, R. Ulrich has proven that the mere **view of nature** can also help decrease anxiety. According to E. Sternberg, this is due to biological reasons of how we perceive space. She contends that when people view natural scenes, nerve cells in the opiate-rich pathway become active giving you a morphine high.²¹ **Clean air filtration** from the exterior is also very important when it comes to architectural design.

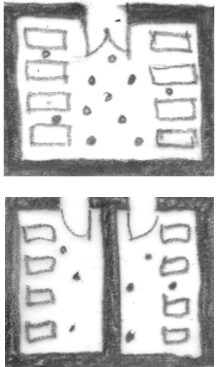
analysis strategy



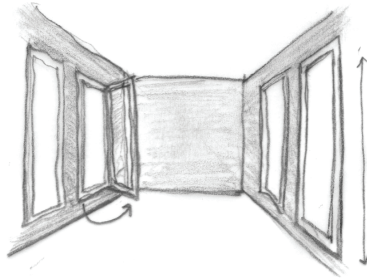
These studies show that there is a clear relationship between the architectural design of a space and the mental health of the occupant. **The following analysis will be of rehab center design that manipulates the enclosure, circulation/sequence pattern, parti, and scale in order to satisfy the 3 main principles of evidence-based design and in turn create a stress reducing environment that can be used for patients as well as low sensation seekers.** These four architectural elements were chosen due to their highly correlated influence on the experience within a space.

EBD component examples

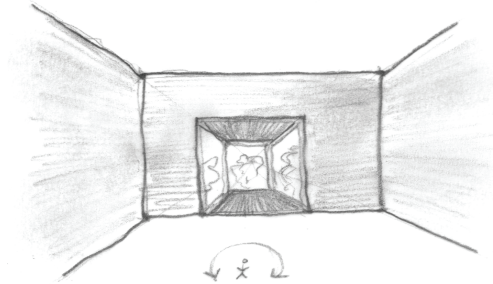
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B.



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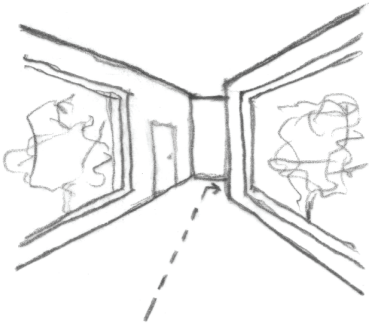


A. **St. Thomas Elgin Hospital** | split of trauma and minor ailments patients decreases stress by decreasing stimulation allowing the later patients to feel calmer and in turn more in control | *circulation , parti, scale*

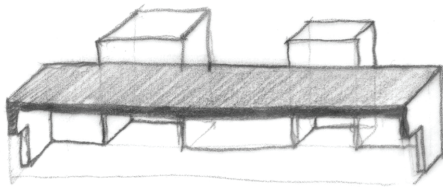
B. **St. Mary's** | unusually tall windows bring in light and display views but also are able to open unlike many other hospital windows allowing natural ventilation to occur | *enclosure*

C. **Bridgepoint Active Healthcare** | pop out windows designed in rooms for wheelchair patients allowing them to easily experience the outdoors in a 3 dimensional way rather than a simple window offering a picturesque view | *enclosure, scale*

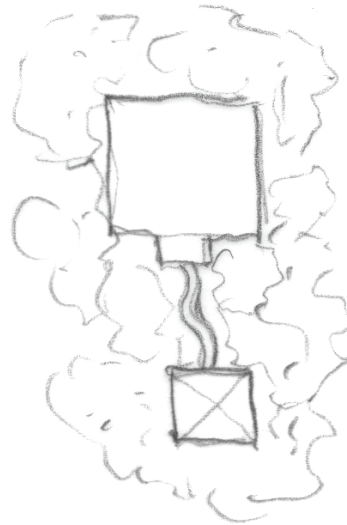
D.



E.



F.



D. **St. Thomas Elgin Hospital** | external cues and natural light are not only used to bring in nature that is already stress reducing, but to also aid in wayfinding by allowing the patient to orient oneself based on what surrounding elements; limits feeling of containment | *enclosure, circulation*

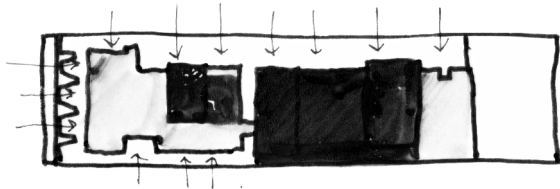
E. **Alberta's Medicine Hat Regional Hospital** | ceilings lofted where nurse stations are to signal patients on stretchers when they are near staff | *circulation, parti, scale*

F. **Juravinski Hospital** | decrease of stress in waiting rooms is achieved by locating the space in the garden allowing a journey to be experienced as one travels through a path surrounded by nature and into the welcoming pavilion | *circulation*

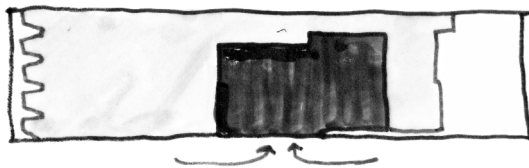
case study

groot klimmendaal rehabilitation

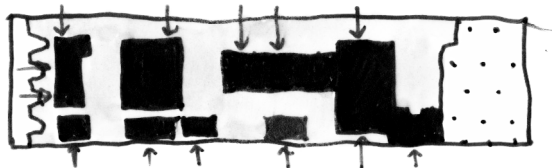
Promoting self-control and self confidence, this is an example of a rehabilitation center that strives to excel in all of the EBD properties. With its highly transparent facade, the building creates a seamless connection to the outdoors. It's location encourages patients to walk around and experience the calming sensations of nature. Programatically, it holds both private and public functions, allowing for patients to interact with the community. The first floor holds the theater, gymnasium, and pool. Clear circulation In section, the project creates a direct route from the valley to the roof garden making the building appear as if it is part of the site. Voids are designated for both nature and light to filter in. These voids not only connect the exterior and interior but also allow for the levels to connect as well.



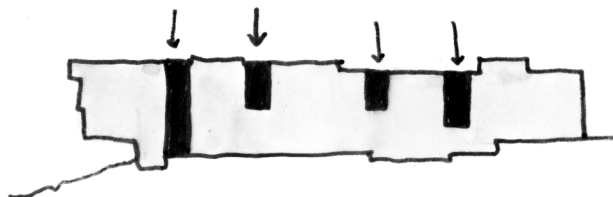
perimeter void lighting the central volumes



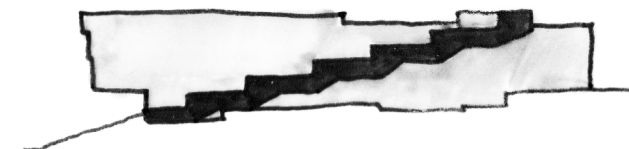
sports facility bringing in public for increase in interaction



lighting on first and ground floor through glass enclosure

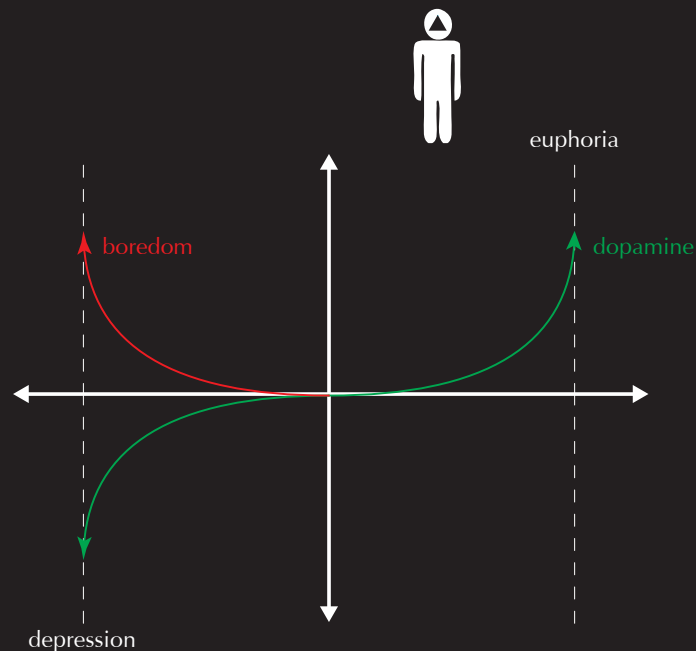


light wells used as gardens offering connections between floors



clear sectional connection joining the valley to the roof garden

hyper stimulation



In contrast to LSS, high sensation seekers (HSS), also known as people with type-T personality, tend to appraise risk differently. **Fear inducing behaviors do not over stimulate them and in turn do not result in anxiety. Risky behaviors, instead, have a positive effect.** According to Zuckerman, this is due to the **ability for HSS to cope with high levels of dopamine created through hyper stimulation.** In order for HSS to achieve euphoria, a **sense of danger must be present boosting the adrenaline levels along with the dopamine.**²² Because **HSS are more susceptible to boredom.**²³ Experiences that reduce stress to create a calming effect do not satisfy their needs and in turn **decrease their dopamine.** Prolonged levels of this effect can lead to a lack of motivation and depression. HSS seekers enjoy activities like scary movies, haunted houses, bungee jumping, sky diving, extreme sports, and other hyper stimulating experiences that create a **natural increase in dopamine.** They are also, however, **more prone to becoming substance abusers.** According to Elena Barbiero, “‘Substances’ trigger internal chemical reactions that lead to a ‘dopamine fest’ in the blood stream, hence the temporary feeling of euphoria and intoxication (with the inevitable ‘downer’): but this can also be ‘engineered’ by the body itself, if exposed to images and activities that stimulate a strong emotional response (fear and pleasure.)”²⁴

These are responses that architecture can create through manipulation of space, naturally satisfying the HSS needs for hyper stimulation.

hyper stimulating activities



amusement parks

The thrill of the extremes brings many HSS to locations like this. Brightly colored rides, with continuous looping structures stimulate visually. Rides use elements of scale as well as sudden change such as giant drops to create an adrenaline rush. Not only is the experience of dropping at great speeds fear inducing, but the small compressive carts tied with the idea that you cannot escape until completion also elicits fear.



dark tourism

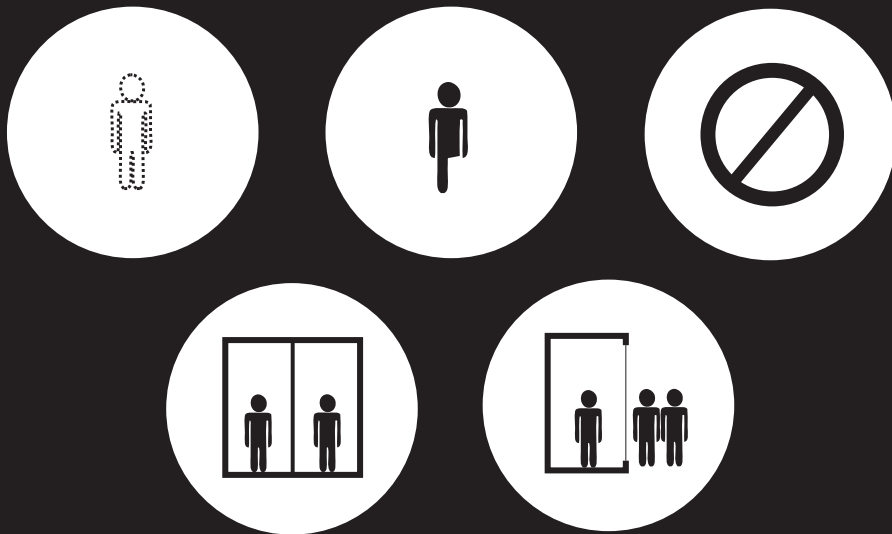
Interested by the dark history behind certain sites, many HSS enjoy visiting places associated with death. This association allows the mind to wander and imagine the events that occurred at the particular location. To HSS these places are thrilling because of their past.



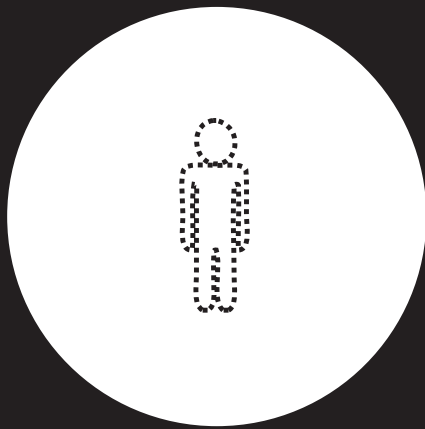
haunted houses

Haunted Houses are central to the idea of environments that induce fear. Like amusement parks, sudden changes in the environment are what haunted house designers want to capitalize on. Lighting effects as well as enclosing spaces are typical used in order to achieve a “spooky” feel.

fear principles



As defined by Karl Albrecht, fear is “an anxious feeling, caused by our anticipation of some imagined event or experience”.²⁵ The feeling of risk is created by tapping into the innate fears that all humans possess: **extinction, mutilation, loss of autonomy, separation, and ego–death.** These five innate fears trigger the fight or flight response and in HSS, a euphoric feeling because of the hyper stimulation. It is required, however, that there is some sense of safety, meaning that it is a survivable experience.²⁶ These five fears will be used as filters of analyzation of thrilling environments.



extinction

the fear of ceasing to exist; “idea of no longer being arouses primary existential anxiety in all normal humans”; believing something to be life threatening leads to a fear of continuing on

disorientation



mutilation

the fear of losing a part of your body altering the way you function; thought of someone or something invading your body's boundaries

loss of a sense



loss of autonomy

the fear of being immobilized, restricted, or imprisoned; the sense that external factors influence the outcome of a situation

claustrophobia



separation

the fear of rejection and loss of connection with others; feeling of becoming a
“non-person”

seclusion



ego-death

the fear of humiliation; a threat to ones feeling of their self worth and integrity

display

art exhibitions

Artists like Carsten Holler have attempted to create perception altering environments through **disorientation**. He argues that this is how hedonism is achieved. By carefully designing **participatory experiences**, Holler explores the limits in human perception. He tests **how senses can be confused, reduced, or heightened through art to lead to an alteration of the participants mental states, moral reactions, and physical sensations.**²⁷

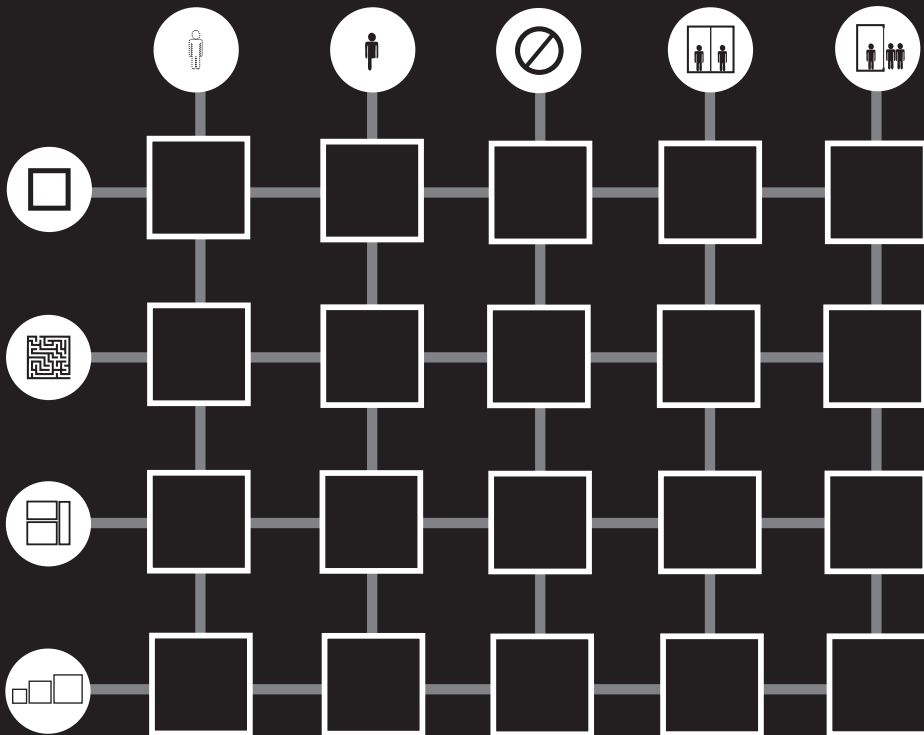


In addition to Carsten Holler's exhibition, the Hayward Gallery was designed to create a "**psychotic experience.**" Defined as "**a rupture with reality,**" projects included in this series also seek to disorient the participant. The key of the exhibition is to test **how space can be manipulated in order to heighten awareness of our spatial relations.** A. Vidler describes this idea as being possible through movement and psychological and optical projections.²⁸

To the left is the "Show Room" design featured in the Hayward Gallery. Architects, Los Carpinteros, recreate a photographic image into a 3D representation to allow visitors to experience the space of a 2D. It strives to facilitate the idea of frozen time, time vanishing from space because of our photographically condition perception.

****more examples of projects can be found in the appendix.**

analysis strategy



The following buildings were chosen as prime examples of thrill architecture. By studying how the architects manipulate the enclosure, circulation/sequence pattern, parti, and scale in order to induce fear, strategies can be identified that can later aid in the design of an experience that would achieve the level of hyper stimulation that high sensation seekers look for.

thrilling architecture

glaciar skywalk



This arch pathway is situated on a cliff edge in Jasper, Canada. Offering a breathtaking view of the surrounding landscape, the Glaciar Skywalk, is described to be equivalent to “a rollercoaster in the park.” Lofted **918** feet in the air, the visitor receives a rush of adrenaline when they **transition from the thick steel structure to the thin glass membrane**, creating a “strange sensations that you’re practically standing on air.” ²⁹

Once again, pure fear of extinction and mutilation are present due to the weightless structure holding you up. The transition from steel to glass heightens the experience because of the sudden change in material and view. Reaching out over **100** feet in the air, the **tight space confines you in a hallway like path and upon reaching the furthest point where the fear is greatest, loss of autonomy is experienced.**



chicago ledge

Located 103 floors above the Chicago urban fabric, “The Ledge” offers a completely unobstructed view of the city. Experts in structural glass design worked on this project with the goal to eliminate the structure of the surrounding walls as well as along the floor. All of the glass panels resulted in weighing over 1,500 pounds. Because the clear glass is low in iron, it is fully tempered for durability.³⁰

Extending out 4.3 feet from the perimeter of the Sear’s tower, this structure offers an “exhilarating new experience”. **Material and structure are key for this design to function.** The scale difference is another element that creates hyper stimulation for the visitor. **The tight space elicits feelings of restriction.** Extinction and mutilation are both strongly activated fears due to the seemingly thin membrane holding the box from collapsing. Transition into the space and the direction of the view creates an idea of separation. While the boxes are lofted high above the cityscape, views from box to box still are clear inducing the fear of ego death.

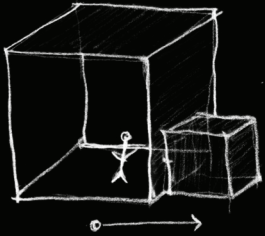
case study

eastern state penitentiary

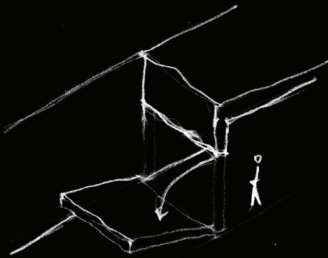


The Eastern State Penitentiary is an example of a way that architecture can induce fear. To begin with, the plan of this decaying 19th century building already induces three of the five innate fears. The central atrium functions as a surveillance area similar to Jeremy Bentham's Panopticon, leading to the prisoners experiencing the fear of ego-death. In contrast to Bentham's project, however, The Eastern State Penitentiary has **wings to disintegrate any source of connection between the prisoners, fear of separation**. Finally, because of the **tight, enclosed structure, the building creates the sensation of feeling confined, loss of autonomy**. Today, this building is used as a site for The Terror Behind the Walls, rated one of the nation's scariest haunted houses. When the designers of the space were interviewed, they stated one of the keys to creating a thrilling experience is picking a **site that is deemed as haunted**. This already elicits a response of fear. They contend that the **narrative** is one of the most important elements when designing a hyper stimulation space. **Circulation and unexpected occurrences are key**. Heightened stimulations can also be created through abrupt changes as well as by creating environments that evoke certain places that are associated with fears. These places can include cemeteries, attics, basements, etc.

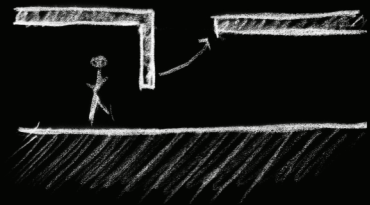
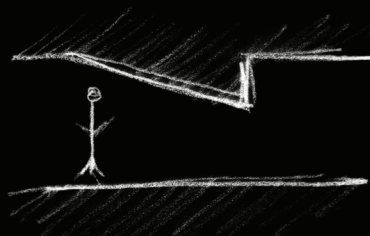
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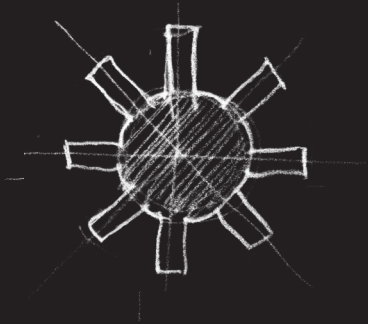
Listed below are some additional elements that the designers of the haunted house argued heightened the stimulation of the experience.

A. sudden transition from vastly large space to a much smaller space heightens feeling of confinement | *circulation, scale, parti, enclosure*

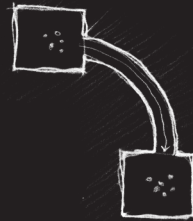
B. sudden change of enclosure to expose something hidden | *enclosure, parti*

C. hanging items force for visitors to physically interact engaging their tactile sensation while also creating a visual barrier | *enclosure*

D.



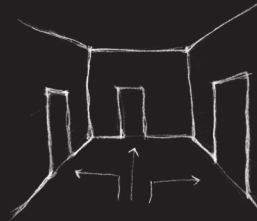
F.



E.



G..



D. floor plan decreases privacy while also separating and secularizing the occupant | *parti, enclosure, scale*

E. need for momentum to be continuously forward in order to avoid other visitors | *circulation*

F. curved path used to hide one group from the other enacting fear of separation | *circulation*

G. multiple options creating diversity while also remaining unsuggestive of what is to come due to similarity | *circulation, enclosure*

application

program proposal

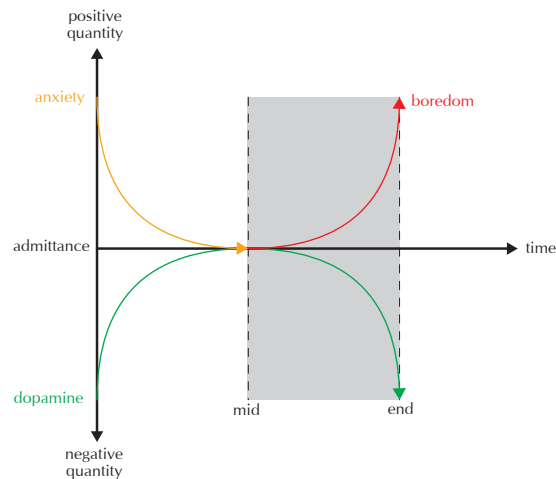


The proposed program is a substance abuse center that hybridizes the two experiences of serenity and thrill.

There are two different programs for addiction treatment. **Inpatient program** removes the addicts from their everyday lives to a facility for certain amount of time. Typically, patients are restricted to interact with family and friends in order to focus on their recovery. An **outpatient program** on the other hand, allows the patient to return home each night. This is typical for short-lived addiction patients. Upon entering the program the substance abuser first detoxes, followed by the rehab process and finally recovery.³¹ **For this project, an inpatient facility will be designed.**

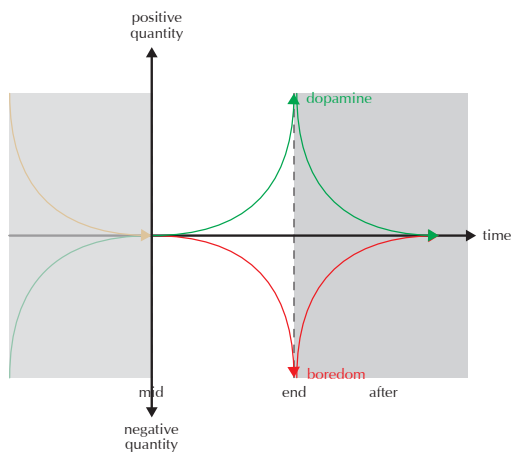
strategy of sequence

HSS levels during experience of hypo stimulating environment



Upon entering, substance user is feeling anxious due to withdrawal. Serene environment aids in decreasing anxiety, however, due to high level of boredom susceptibility, HSS need stimulation again. Completing the program when anxiety is reduced may still result in relapse due to the HSS natural need for high stimulation.

HSS levels during experience of hyper stimulating environment



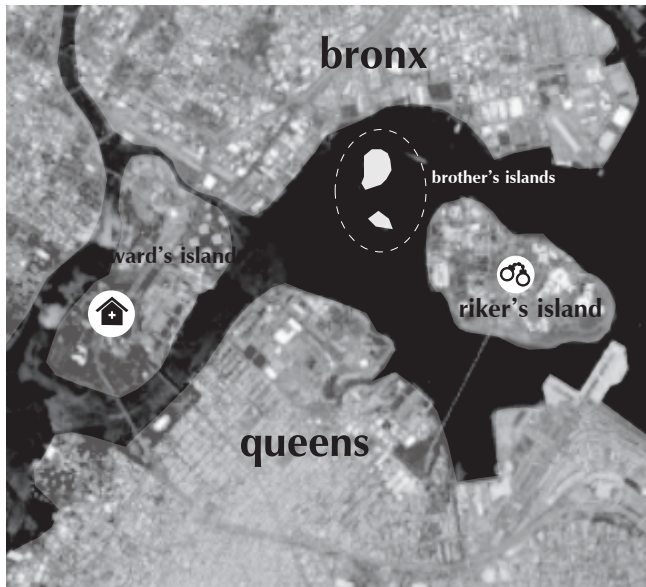
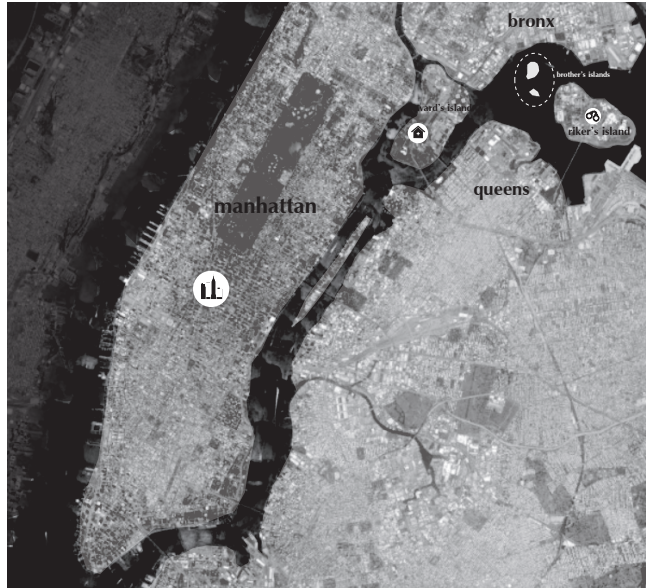
If, hyper stimulating environment is added to the process, dopamine levels would increase dramatically. A new experience of stimulation would occur allowing the HSS to learn to seek out similar experiences that naturally create a dopamine high.

During **detox**, **anxiety is greatly increased due to withdrawal**. This is where the **stress reducing environment** is crucial. By designing an experience based on the manipulation of material, circulation/sequence pattern, parti, and scale in accordance to the EBD principles, anxiety will be reduced aiding the patient to return to a low level of anxiety.

The **rehab process** is designed to identify triggers and how to deal with triggering situations when they come up in order to avoid relapse.³² In the year of 2000, a study was done to showing that there is a 40-60% chance for drug abusers to relapse.³⁴ **Many argue that this is because most drug abusers are HSS and they continue to have the urge to satisfy their need for hyper stimulation.** As mentioned before, this necessity of dopamine production can be naturally satisfied through thrilling experience. **By designing an additional program to the rehabilitation center that exposes patients to this alternate and healthier way of increasing dopamine, this thesis contends that substance abusers will be less likely to relapse and will instead learn to depend on natural stimulation.**

The design of the rehabilitation center needs to be based on the reaction of the patient. **By creating a two-step process inpatient rehabilitation center that tailors both to the high anxiety effect created due to withdrawal and the natural need for hyper stimulation after, drug abusers will learn to accommodate their needs through alternate methods.**

site analysis



The stigma of an island can either be a positive one or a negative one. This **dichotomy** is similar to the relationship of the two opposing experiences discussed in this thesis proposal of hypo stimulation and hyper stimulation. In close proximity to NYC, the Brother Islands sit in the Hell Gate off of the Bronx shoreline. To the South East of the islands is located Riker's Island, widely known for the **prison** located in it's center The Ward's Island to the South West, contains a large park as well as the **Manhattan Psychiatric Center**.

The Brother Islands are historically known to have **polar histories**. The South is known for its use as a site for early owner of the Yankees, Jacob Rupert's, vacation home which burned down in **1907**. Today, it is owned by the Wildlife Preserves. In contrast, the North Brother Island has a much darker history. It was first used as an extension to the Riverside Hospital in **1885** to help with treatment of infectious disease. It was abandoned in the early **1900s** after which it was used for WWII veteran housing. In the **1950s**, what is claimed to be one of the first adolescent drug addiction centers was situated there. By the **1960's**, however, the site was once again abandoned due to corruption. The buildings still remain, however, many say that the only one that will stay standing the central tuberculosis pavilion. Today, North Brother Island is used as a bird sanctuary while the South Brother Island is owned by the Wildlife Conservation Society defining it to be a wildlife sanctuary. Transportation to the islands is difficult as of today due to the lack of program, however, thrill seekers trespass to explore the dark history of the North Brother Island.³⁴

site analysis

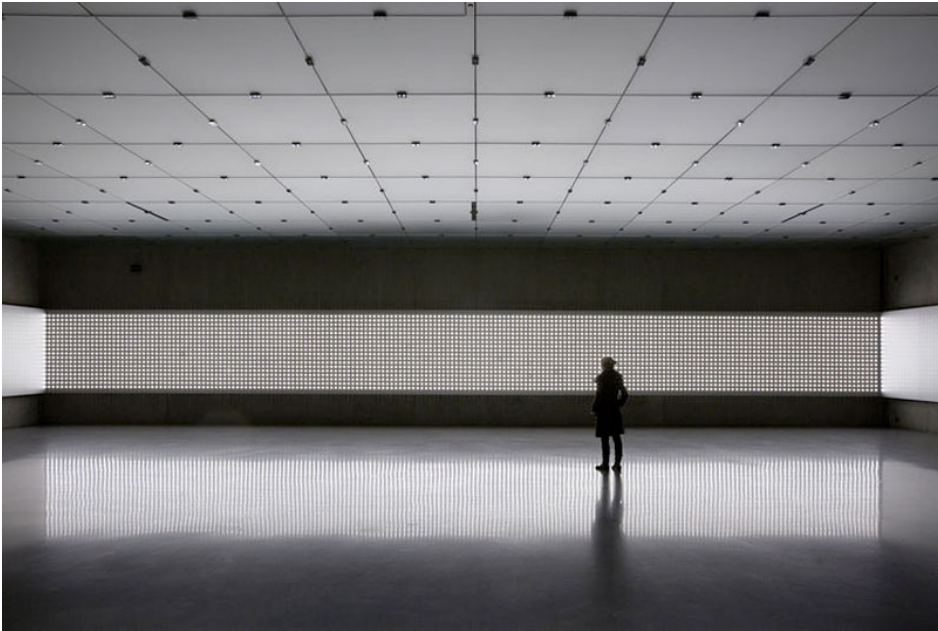
This island not only offers a rich history that can aid with the design of a calming and thrilling experience, but it is also a beneficial location because of the high substance abuse rates in NY.

Programs proposed for this site in the past few years have included an Autistic School for Children as shown to the left which seeks to create hypo stimulation as well as hyper stimulation in order to account for the differences in the disabilities.³⁵ Another proposal has been to create a public parkland or a sort of Disneyland with council member Fernando Cabrera arguing that the area is in need of something new.³⁶ Both programs suggested closely relate to the program proposed in this thesis in different ways.



site plan of Autistic School proposal

appendix



light room

about the contrast of light and darkness; lights are turned on and off to create a hallucinatory aspect forcing your brain activity to synchronize with the flashing light pattern; even when eyes are closed, the visual phenomena remains on the retina



gantenbein corridor

a sensory labyrinth experienced right after light room for contrast and to create disorientation; participant is forced to learn where the boundaries are because of loss of concrete references



upside down mushroom room

a room experienced right after disorienting light vs dark environments designed to further perceptually disorient the visitor while also displaying how the “real world” looks; euphoria is induced because of the hallucinogenic properties; can be seen as a metaphor for art because it works as a “drug” that can lead to greater awareness



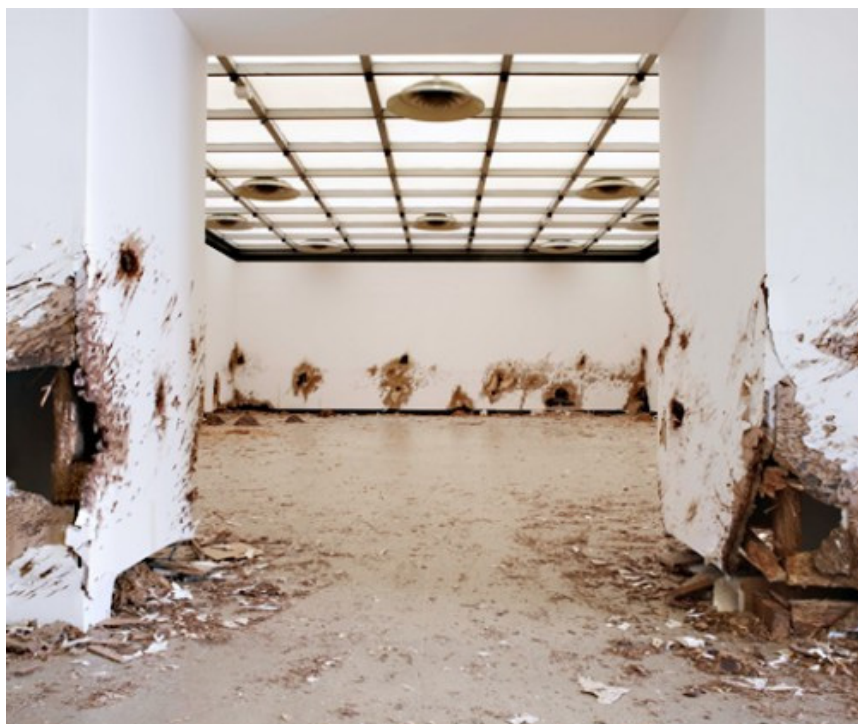
swinging curve

corridor that hovers above ground and sways slightly, enough to destabilize visitors within; causes sensation that one's own body is swaying forcing the want to physically correct one's position in relation to the space



psycho tank

designed to deprive one of their senses, visitor lays in body-temperature salt water which creates a feeling of nothingness, creating a relaxing state of mind that removes the body's sense of gravity



to the memory of h.p. lovecraft

mike nelson

link between architectural violence and the traces of an absent body; visitors
job is to experience and reconstruct a narrative because of the “unknown”;
visitor’s awareness of body in relation to architecture is heightened



life tunnel

atelier bow-wow

designed to have a hybrid identity: a room, a passageway, a conduit for light, and a walk in periscope; idea of a “micro public space,” public space for one person; visitor must adjust body in order to move through the space; become more in tune with perceptual and sensorial role of our bodies



air-port-city

tomas saraceno

freestanding dome with transparent enclosure; two story “pillow”; bottom floor reflects sky; ephemeral structure that forces visitor’s to lose their sense of gravity

bibliography

1. Kopec, David Alan. *Environmental Psychology for Design*. New York: Fairchild, 2006.
2. "Parkinson's Disease." University of Maryland Medical Center. Accessed December 2, 2014. <http://umm.edu/health/medical/reports/articles/parkinsons-disease>."
3. "Dopamine Agonists." EPDA. Accessed December 3, 2014. <http://www.epda.eu.com/en/parkinsons/medinfo/dopamine-agonists/>.
4. "Addiction and Type-T Personality: Addicted to Horror." Health Guidance. Accessed December 8, 2014. <http://www.healthguidance.org/entry/16460/1/Addiction-and-Type-T-Personality-Addicted-to-Horror.html>.
5. "Marvin Zuckerman." Big Think. Accessed December 1, 2014. <http://bigthink.com/experts/marvinzuckerman>.
6. Zuckerman, Marvin. *Behavioral Expressions and Biosocial Bases of Sensation Seeking*. Cambridge: Cambridge University Press, 1994.
7. Zuckerman, Marvin, Sybil B. Eysenck, and H. J. Eysenck. "Sensation Seeking In England And America: Cross-cultural, Age, And Sex Comparisons." *Journal of Consulting and Clinical Psychology*: 139-49.
8. "The Journal of Neuroscience Society." Dopamine Modulates Risk-Taking as a Function of Baseline Sensation-Seeking Trait. Accessed December 3, 2014. <http://www.jneurosci.org/content/33/32/12982.full>.
9. "Addiction and Type-T Personality: Addicted to Horror." <http://www.healthguidance.org/entry/16460/1/Addiction-and-Type-T-Personality-Addicted-to-Horror.html>.
10. Munsey, Christopher. "Frisky, But More Risky." American Psychological Association. Accessed December 8, 2014. <http://www.apa.org/monitor/julaug06/frisky.asp>
11. Carey, Elea. "Psychosis." Healthline. Accessed December 3, 2014. <http://www.healthline.com/health/psychosis#Ov>.
12. Root, V. "How to Treat Anxiety Naturally." Calm Clinic. Accessed December 2, 2014. <http://www.calmclinic.com/anxiety/treatment/na>.

13. "Zen Garden Secrets Revealed." BBC News. September 26, 2002. Accessed December 3, 2014. <http://news.bbc.co.uk/2/hi/technology/2283398>.
14. Mindel, Lee. "Lee F. Mindel Travels to Finland's Paimio Sanatorium." Architectural Digest. Accessed December 1, 2014. <http://www.architecturaldigest.com/blogs/architects-eye/2013/06/paimio-sanatorium-alvar-aalto-architecture-visit-finland-blog>.
15. Ulrich, Roger. "View through a Window May Influence Recovery from Surgery." National Center for Biotechnology Information. April 27, 1984. Accessed December 1, 2014. <http://www.ncbi.nlm.nih.gov/pubmed/6143402/>.
16. Neutra, Richard Joseph. *Survival through Design*. New York: Oxford University Press, 1954.
17. Sternberg, Esther M. *Healing Spaces the Science of Place and Well-Being*. Cambridge, Mass.: Belknap Press of Harvard University Press, 2009, 13.
18. Weinstein Kaplan, Bette. "Evidence Based Design: A New Concept in Health Care Facilities That Puts the Focus on Patients." ONA. September 25, 2014. Accessed December 1, 2014. <http://www.oncologynurseadvisor.com/evidence-based-design-a-new-concept-in-health-care-facilities-that-puts-the-focus-on-patients/article/373488/>.
19. "Designing Health Care Environments: Part I. Basic Concepts, Principles, and Issues Related to Evidence-based Design." National Center for Biotechnology Information. Accessed December 2, 2014. <http://www.ncbi.nlm.nih.gov/pubmed/19639918>.
20. Esther M. Sternberd, *Healing Spaces the Science of Place and Well-Being*, 21.
21. Esther M. Sternberd, *Healing Spaces the Science of Place and Well-Being*, 33.
22. "Sensation Seeking." Consumer Health Informatics Research Resource. Accessed December 8, 2014. <http://chirr.nlm.nih.gov/sensation-seeking.php>.
23. Zuckerman, Marvin, Sybil B. Eysenck, and H. J. Eysenck. "Sensation Seeking In England And America: Cross-cultural, Age, And Sex Comparisons." *Journal of Consulting and Clinical Psychology*: 139-49.
24. "Addiction and Type-T Personality: Addicted to Horror." <http://www.healthguidance.org/entry/16460/1/Addiction-and-Type-T-Personality-Addicted-to-Horror.html>.
25. Albrecht, Karl. "The 5 Fears We All Share." *Psychology Today: Health, Help, Happiness and Find a Therapist*. Accessed December 1, 2014. <http://www.psychologytoday.com/blog/brainsnacks/201203/the-only-5-fears-we-all-share>.

26. Karl Albrecht, "The 5 Fears We All Share." Psychology Today: Health, Help, Happiness and Find a Therapist," <http://www.psychologytoday.com/blog/brainsnacks/201203/the-only-5-fears-we-all-share>.
27. Ller, Carsten, Massimiliano Gioni, and N.Y. York. Carsten Höller: Experience. New York, N.Y: Skira Rizzoli, 2011.
28. Rugoff, Ralph. Psycho Buildings: Artists Take on Architecture. London: Hayward Pub., 2008.
29. "Incredible Thrill and Adventure in Jasper with New Glacier Skywalk - Clapway." Clapway. July 11, 2014. Accessed December 28, 2014. <http://clapway.com/2014/07/11/incredible-thrill-and-adventure-in-jasper-with-new-glacier-skywalk/>.
30. "Facts About the Ledge." Skydeck Chicago. Accessed December 28, 2014. <http://theskydeck.com/the-tower/facts-about-the-ledge/>.
31. "The Addiction Rehabilitation Process." Rehabs.com. Accessed December 1, 2014. <http://www.rehabs.com/about/the-addiction-rehabilitation-process/>.
32. "The Addiction Rehabilitation Process," <http://www.rehabs.com/about/the-addiction-rehabilitation-process/>.
33. "Relapse Rates for Drug Addiction Are Similar to Those of Other Well-characterized Chronic Illnesses." National Institute on Drug Abuse. July 28, 2008. Accessed November 17, 2014.
34. "Riverside Hospital (North Brother Island)." Opacityus. Accessed December 2, 2014. http://opacity.us/site100_riverside_hospital_north_brother_island.htm.
35. "North Brother Island School for Autistic Children / Ian M. Ellis & Frances Peterson." ArchDaily. Accessed December 3, 2014. <http://www.archdaily.com/314629/north-brother-island-school-for-autistic-children-competition-entry-ian-m-ellis-frances-peterson/>.
36. Rosenberg, Zoe. "Officials Want to Bring Park, Disneyland to North Brother Island." Curbed NY. October 16, 2014. Accessed December 3, 2014. http://ny.curbed.com/archives/2014/10/16/officials_want_to_bring_park_disneyland_to_north_brother_island.php#more.